

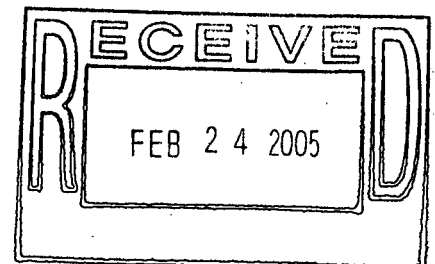
**Final Project Closeout Report**  
For  
**Building 705**

**Revision: 0**

**February 2005**

**Remediation, Industrial D&D, and Site Services**  
**Kaiser Hill Company, LLC**

Review for Classification/*UCNI*  
Name: *CJ FREEMAN y/m*  
Date: *02/21/05*



**ADMIN RECORD**

**B705-A-000014**

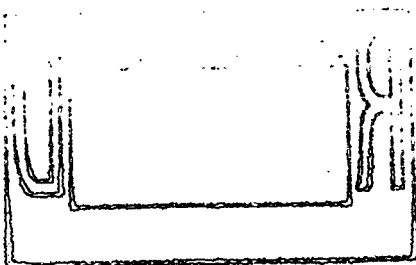
*1/21*

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## **I. Introduction**

### **Building 705 Description**

Building 705 was constructed in 1966 as the R&D ceramics laboratory and the coatings laboratory. Building 705 was a 3700 sq. ft., single story structure with a high bay laboratory area. The building was constructed with concrete block walls, a poured-in-place concrete slab floor, and a metal roof with built-up roofing. Two additions were constructed: in 1969, the measurement room (Room 103) south of the original structure, and in 1975, the two-story mechanical room east of the original structure. In 1991, the sanitary floor drains were grouted.

The following utilities; electric, plant sanitary, plant water, and plant steam serviced Building 705. Fire protection was provided by overhead sprinkler system, and wall mounted fire extinguishers. The building originally had hydrogen, helium, nitrogen and oxygen gas supplied by tanks located on the exterior on the south side of the building. Tanks were remove prior to demolition.

Based on the analysis of radiological, chemical and physical hazards contained in the RLCR, Building 705 was classified as a RFCA Type 2 facility pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999). The Type 2 classification was based on widespread beryllium contamination throughout the facility.

Closure of the facility was completed in accordance with the Rocky Flats Cleanup Agreement Standard Operating Protocol (RFCA RSOP) for Component Removal, Size Reduction and Decontamination Activities and Facility Disposition. Integrated Work Control Program (IWCP) procedures were followed during building decontamination and decommissioning.

## **II. Action Description**

### **Utility Disconnect**

Electrical isolation was performed on all original feeds to systems and equipment associated with B705. Isolation of electrical power was performed by Lock-Out/Tag-Out, then isolating the main power to the facility by cutting, removing or air-gapping electrical systems in the facility. This "cold and dark" process greatly reduces the potential for electric shock injuries to worker during interior dismantling, beryllium decontamination, and asbestos abatement activities. Use of light stands and external generators provided interior lighting for these activities.

Potable water feed to the facility was discontinued, and isolated seven feet below final grade. All sanitary fixtures were disconnected, and sewer lines were flushed with a volume of high-pressure water equal to approximately 10 times the volume of the pipe and the pipes were grouted. Sewer lines were then isolated six feet below grade at a manhole exterior to the facility, along the main sewer line. This was accomplished by grouting the sewer line at the manhole.

Steam and condensate lines were isolated exterior to the facility. Steam service to the plant was discontinued and steam lines were air gapped at Building 443 (Steam Plant) in July, 2003. See Article 1 of Appendix 1 for utility disconnects.

### **Contaminants of Concern**

Contaminants of concern included asbestos and beryllium.

Characterization was conducted in accordance with the RLCP and PDSP. CDPHE-certified asbestos inspectors conducted the asbestos inspections and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1*. Building materials suspected of containing

asbestos were identified for sampling at the discretion of the inspectors. There was adequate historical and process knowledge to conclude that beryllium was used or stored in this building, therefore, random and biased beryllium sampling was performed in accordance with the RLCP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999*.

#### **Asbestos Abatement**

Kaiser-Hill performed asbestos abatement activities. Abatement activities commenced October 2003, and were completed March 2004, and included the removal of asbestos-containing transite panels, and asbestos-containing "Thermal System Insulation" (TSI).

During asbestos removal operations, the building was posted as an asbestos control area. The area was pre-cleaned using HEPA-filtered vacuums. Only qualified workers with current asbestos training, physicals, and respirator training/fit testing were utilized to perform abatement activities.

During abatement activities, Personal Protective Equipment (PPE) consisted of disposable coveralls, disposable booties, hoods, gloves, and full-face, negative pressure, HEPA-filtered respirators. PPE was donned prior to entering the work area. Upon completion of work, respirators were wet-wiped and removed, and all other PPE was removed and bagged as asbestos waste for disposal.

Total quantities of asbestos containing material (ACM) waste removed from the facility are noted in Section VII, Waste Stream Disposition.

#### **Beryllium Removal**

Kaiser-Hill performed beryllium removal activities. Activities commenced February 2004 and were completed on August 2004. Due to the nature of the facility-wide presence of beryllium, interior strip out was an integral part of beryllium removal, and was done concurrently.

Beryllium removal activities included the removal of beryllium-contaminated equipment as well as supply and exhaust ductwork in the laboratory and office areas of the building. This was accomplished through bagging, shrink-wrapping, foaming, and/or applying fixative to the various contaminated components. Removed components were disposed of as beryllium contaminated waste.

Upon removal of contaminated systems, the entire building interior was wiped down using a wetting solution and disposable cloths. After completion of Pre-Demolition Surveys, the interior of the facility was sprayed with a fixative to reduce the potential for release of residual beryllium during demolition.

During beryllium removal activities, Personnel Protective Equipment consisted of disposable coverall, two sets each of disposable gloves and booties, two disposable hoods, and powered air purifying respirators. PPE was donned prior to entering the work area. Upon completion of work, respirators were wet wiped and removed, with all other PPE was bagged out and disposed of as waste.

Total quantities of beryllium-contaminated waste removed from the facility are noted in Section VII, Waste Stream Disposition.

#### **RCRA/TSCA**

Building 705 did not contain any RCRA or TSCA units requiring closure. For disposition of waste streams, please see Section VII.

### **III. Verification Action Goals Were Met**

Four action objectives were established for Building 705 removal project prior to beginning demolition:

***Decontamination of the facility (as necessary) to support release for decommissioning per site approved procedures.***

The facilities' primary structures were decontaminated to free-release standards and disposed of in an off-site landfill. A fixative was applied to the beryllium remaining in the facility to reduce the possibility of a release during demolition activities.

***Decommissioning of the Building 705 facility in accordance with RFCA and applicable or relevant and appropriate requirements.***

RFCA and other relevant requirements were complied with throughout the project. Consultations with the LRA were conducted throughout the project.

***Complete decontamination and decommissioning activities in a manner that is protective of Site workers, the public and the environment.***

Decontamination and decommissioning activities were completed within regulatory requirements. Air sampling for beryllium was conducted during demolition activities (see Section VI). Dust control measures were implemented during demolition, using wet methods via fire hydrants and fire hoses. No injuries or releases to the environment occurred during the project.

***Demolish the Building 705 facility structures and utilities to 3' below final grade.***

The facility superstructure and slab were completely removed during demolition. Underground utilities were removed to a minimum of 3' below grade. See Appendix 1 Utilities Disconnects for the specific location of disconnects.

#### **IV. Verification of Treatment Process**

This section is not applicable.

#### **V. Radiological Analysis**

Building 705 was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files for the Building 705 Radiological Characterization Plan). One radiological survey unit package was developed for the interior of Building 705: 705001. Individual radiological survey unit packages are maintained in the RISS Characterization Project files.

The Building 705 survey unit package was developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*.

#### Building 705 Interior (Survey Unit 705001)

Building 705 interior was classified as a MARSSIM Class 2 Survey Unit because this building was not expected to contain residual radioactivity greater than the DCGL<sub>w</sub>, but had a potential for low levels of contamination. A total of 21 TSA measurements (19 random grid and 2 QC) and 19 RSA measurements (19 random grid) were taken and scan surveys performed. Alpha scan surveys of 50% of the floor (216 m<sup>2</sup> minimum) and 25% of the wall and ceiling interior surfaces (474 m<sup>2</sup> minimum) at biased locations were performed. None of the measurements or scans indicated elevated activity above applicable transuranic DCGL values.

#### Building 705 Exterior:

The Building 705 exterior was radiologically surveyed during the RLC in accordance with PDSP requirements and met the PDSP radiological release limits.

## VI. Demolition Survey Results

### Ambient Monitoring for Beryllium

The ambient air around the B705 Demolition Project was monitored for beryllium during demolition. Concentrations were based on an 8 hour Time Weighted Average (TWA) and were compared to the Permissible Exposure Limit (PEL) for Be. All readings for beryllium came back as non-detect.

### Summary of Airborne Radioactivity Sampling

Air sampling was not required during demolition. Building 705 had been released from radiological controls prior to demolition.

## VII. Waste Stream Disposition

Section C. Waste Data (complete categories as appropriate)	
<b>Sanitary Disposal</b>	
Disposal Site:	BFI Tower Road
Waste Volume (yd <sup>3</sup> ):	1496
Waste Weight (tons):	967.5
Additional Information:	Concrete and structural steel from building
<b>Hazardous Disposal</b>	
Disposal Site:	Kettleman Hills Facility, Kettleman City, CA or Bethlehem Apparatus Co, Hellertown, PA
Waste Volume (yd <sup>3</sup> ):	Minor amounts
Additional Information:	Electronic circuit boards, thermostats, exit signs, batteries, fluorescent light bulbs and any other RCRA hazardous components were removed and taken to the RFCA temporary unit for combination with like waste streams for proper disposal.
<b>TSCA Waste Disposal</b>	
Disposal Site:	BFI Foothills Hwy. 93
Waste Volume (yd <sup>3</sup> ):	Minor amounts (Bulk Product Waste)
Additional Information:	Fluorescent ballasts, including non-leaking PCB ballasts, remained in the building and were disposed of with the building demolition debris. Leaking ballasts were removed and taken to a RFCA temporary unit

	for combination and disposal with like wastes.
<b>Beryllium Waste Disposal</b>	
<b>DISPOSAL SITE:</b>	BFI Tower Road
<b>Waste Volume (yd<sup>3</sup>)</b>	210
<b>Additional Information:</b>	
<b>Asbestos Waste Disposal</b>	
<b>Disposal Site:</b>	BFI Tower Road
<b>Waste Volume (yd<sup>3</sup>):</b>	15
<b>Additional Information:</b>	

### VIII. Deviations From the Decision Document

No deviations from the decision document were noted.

### IX. Description of Site Condition at End of Decommissioning

The B705 structure and slab were removed during demolition. All associated drains, piping, and utilities were removed to a minimum of 3' below grade. See attachment 1, Utility Disconnects.

### X. Demarcation of Excavation

This section is not applicable.

### XI. Demarcation of Wastes Left in Place

No waste was left in place.

### XII. Dates and Duration of Specific Activities

<u>Activity</u>	<u>Responsible Contractor</u>	<u>Dates</u>
Asbestos Abatement	Kaiser Hill	10/03-3/04
Interior Strip-out/Beryllium Removal	Kaiser Hill	2/04-8/04
Demolition	Kaiser Hill	7/04-9/04
Demobilization	Kaiser Hill	9/04

### XIII. Final Disposition of Wastes

See Section VII.

### XIV. Next Step for Area

Final grading and revegetation will be conducted when the B776/777 project is complete. Coconut mat and staked waddles have been placed in the area for erosion control until final grading and revegetation are complete.

# 705 Location Map

## Map Features

- Buildings Remaining
- D&D Facility
- Paved Roads
- Dirt Roads
- Lakes
- Fence Removed
- Fence Remaining
- Streams
- Railroad Removed
- Railroad Remaining



1:189

1 inch equals 16 feet

State Plane Coordinate Projection  
Colorado Central Zone (3476)  
Datum: NAD27

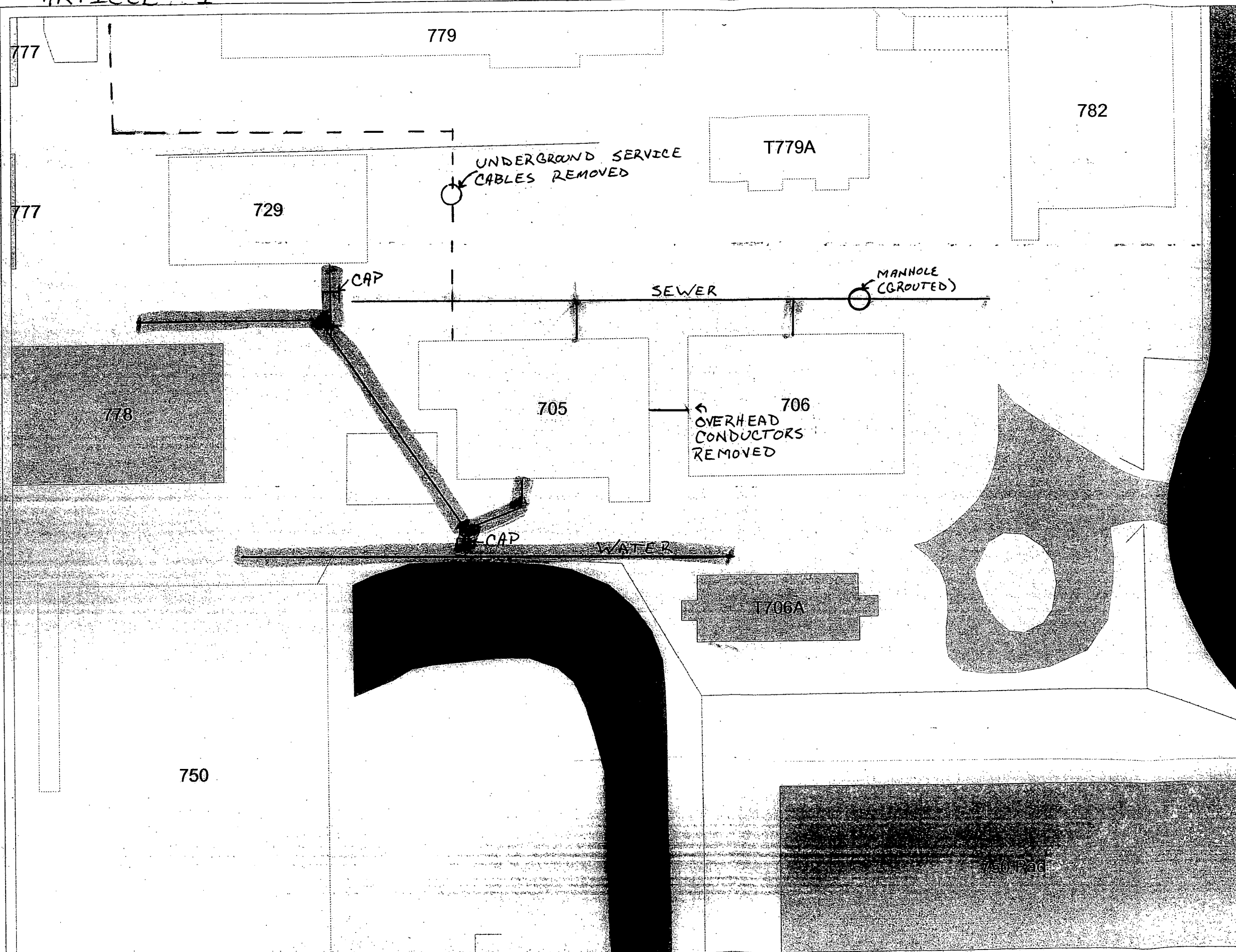
U.S. Department of Energy  
Rocky Flats Environmental Technology Site

GIS Dept. (303) 966-7707

Prepared By:  
**CH2MHILL**

Prepared For:  
**KAISER HILL  
CORP.**

None (recreate)





**Appendix 2**  
**Rocky Flats Environmental Technology Site**  
**Contact Records**

Primary Site Contact	Vern Guthrie	Primary Reg Contact	Dave Kruchek
Secondary Site Contact		Secondary Reg Contact	
Unit	Building	Site Phone	Agency
		*7419	CDPHE

**Purpose**

Document discussions during the monthly Windshield Tour meeting

**Discussion**

During the monthly Windshield meeting with Steve Tower and Dave Kruchek, the following items were discussed. Building 705 status/information on Hazard Reduction activities: - Gary Konwinski provided a complete presentation/review of the work package being used to complete the first three phases of the work. Copies of the package were provided to Steve Tower and Dave Kruchek - Four phases of work are planned. 1. Remove office material and equipment 2. Remove material in the Be control area that has not been listed as containing contamination/potentially contaminated 3. Remove all remaining equipment, except items in the coatings laboratory and possibly the capital equipment in the facility 4. Decontaminate and removal of all equipment in the coatings lab - Dave Kruchek agreed that the work for phases 1 and 2 should proceed based upon the information/methods identified in the package. It was also agreed that prior to beginning phase 3 work, another walk-down would be completed with DOE and the State. The exception will be that some of the items within the phase 3 effort may be sprayed with CC Wet encapsulate during phase 2 work. - Once the first three phases are complete, a better review can be performed of the work required for phase 4. Another review process will be necessary with DOE and the State

Number	465		
Date and Time	8/14/2001 11:00:00 AM		
Primary Site Contact	Vern Guthrie	Primary Reg Contact	Dave Kruchek
SeconddaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	705	*7419	CDPHE

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**Purpose**

Document discussions during tour of Building 705

**Discussion**

On Tuesday, August 14, 2001, at 11 :00 AM, a tour was conducted of Building 705. This facility contains areas where Be is present. The task is to cleanout the building in preparation for characterization and closing the facility. Attending the walkdown was Dave Kruchek, Steve Tower, Gary Konwinski, Margaret Kimokeo and Vern Guthrie. Building 705 work is divided into four (4) Phases. Phase I and II are complete and Phase III is 50% complete. RISS and CDPH&E previously agreed to proceed with work to the point of "fixed equipment" removal. Today's review/tour was to evaluate the completed work. Based upon this review, it was agreed that the second half of Phase III (fixed equipment removal) would proceed, as well as characterization of the laboratory area (a portion of the Phase IV work). When characterization data is complete, and prior to clean-out of the laboratory area, further discussions would be necessary.

Number 518  
Date and Time 11/15/2001

Primary Site Contact Vern Guthrie Primary Reg Contact Dave Kruchek  
SeconddaySite Contact Secondday Reg Contact

Unit Building Site Phone Agency  
705 \*7419 CDPHE

#### Purpose

Document a phone conversation regarding planned work west of Building 705

#### Discussion

On November 14, 2001, Dave Kruchek and Vern Guthrie discussed the work being planned for the area between Building 705 and Building 778. Located in this area is a cooling tower associated with Building 705. Building 707/776/777 management has requested the removal of the tower, as the area is needed as a staging location for cargo containers. The required work and responsibilities are: 1) RISS/RFCSS - - Disconnect electrical and water supplies between Building 705 and cooling tower. - Remove piping as required back to Building 705. - Prepare the Property Release Evaluation (PRE) for the unit and perform the required surveys 2) Buildings 707/776/777 - - Perform asbestos evaluations on piping and remediate as necessary. - Remove and dispose of cooling tower. - Sample concrete pad for free release. - Develop soil disturbance permit for pad and piping removal. - Remove concrete pad. If not releasable, place in proper waste containers. Dave Kruchek did not have issues with accomplishing the removal of the cooling tower utilizing the PRE process and removal of the pad if properly sampled for free release. If the pad cannot be free released, then disposal will follow the proper site process.

Number	1381		
Date and Time	7/29/2004 7:00:00 AM		
Primary Site Contact	J.R. Marschall	Primary Reg Contact	Dave Kruckeck
SeconddaySite Contact		Seconday Reg Contact	
Unit	Building	Site Phone	Agency
	705		CDPHE

**Purpose**

Dirty Demolition of Building 705

**Discussion**

Prior to the beryllium abatement process in Building 705, beryllium concentration was as high as 779.0 ug/100cm<sup>2</sup> with a number of samples showing concentrations in the range of 8.5 to 145.0 ug/100cm<sup>2</sup>. The beryllium cleaning process in Building 705 included vacuuming, then an application of CC Wet, followed by wiping with clean dry towels in areas not exceeding 6 to 8 square feet at a time. After that type of thorough cleaning from top to bottom, ninety subsequent beryllium surveys indicated five spots with concentrations between 1.0 and 8.7 ug/100cm<sup>2</sup> and ten spots between 0.2 and 0.99 ug/100cm<sup>2</sup>. The remaining 75 surveys were below 0.2 ug/100cm<sup>2</sup>. J.R. Marschall contacted Dave Kruckeck to request, despite the fifteen elevated surveys, that the entire building be sprayed with a fixing agent as was the original plan and proceed to demolition. Dave agreed to this as long as beryllium monitoring is conducted during the demolition and load out process, and the waste generated during demolition will be sent off-site and not recycled or left on site.

**SURVEY UNIT 705-2-001**  
**RADIOLOGICAL DATA SUMMARY - PDS**

**Survey Unit Description: B705 (Exterior)**

705-2-001  
PDS Data Summary

Total Surface Activity Measurements			Removable Activity Measurements		
	25	25		25	25
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-10.5	dpm/100 cm <sup>2</sup>	MIN	-0.9	dpm/100 cm <sup>2</sup>
MAX	73.5	dpm/100 cm <sup>2</sup>	MAX	6.7	dpm/100 cm <sup>2</sup>
MEAN	30.0	dpm/100 cm <sup>2</sup>	MEAN	1.1	dpm/100 cm <sup>2</sup>
STD DEV	21.2	dpm/100 cm <sup>2</sup>	STD DEV	1.9	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>	TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>

**SURVEY UNIT 705-2-001  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3	4
Serial #:	1366	3125	662	3107
Cal Due Date:	6/26/03	4/21/03	8/19/03	8/6/03
Analysis Date:	4/9/03	4/9/03	4/10/03	4/10/03
Alpha Eff. (c/d):	0.209	0.215	0.223	0.218
Alpha Bkgd (cpm)	4.7	1.3	3.3	2.7
Sample Time (min)	1.5	0.218	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup>
1	4	12.0	55.0	2.0	9.2	40.1
2	4	16.0	73.4	4.0	18.3	58.4
3	1	14.0	67.0	3.3	15.8	52.0
4	4	3.3	15.1	3.3	15.1	0.1
5	1	13.3	63.6	4.0	19.1	48.6
6	1	11.3	54.1	3.3	15.8	39.1
7	3	1.0	4.5	5.0	22.4	-10.5
8	1	9.3	44.5	4.7	22.5	29.5
9	4	19.3	88.5	3.3	15.1	73.5
10	4	7.0	32.1	3.0	13.8	17.1
11*	1	17.3	82.8	1.3	6.2	67.8
12	4	4.0	18.3	1.3	6.0	3.4
13	3	8.0	35.9	8.0	35.9	20.9
14	3	10.0	44.8	3.0	13.5	29.9
15	3	7.0	31.4	1.0	4.5	16.4
16	2	10.7	49.8	0.7	3.3	34.8
17	1	15.3	73.2	2.0	9.6	58.2
18	3	6.7	30.0	4.0	17.9	15.1
19	3	8.0	35.9	6.0	26.9	20.9
20	3	6.0	26.9	2.0	9.0	11.9
21	3	9.0	40.4	4.0	17.9	25.4
22	1	5.3	25.4	2.0	9.6	10.4
23	4	9.3	42.7	2.0	9.2	27.7
24	1	8.0	38.3	3.3	15.8	23.3
25	1	10.7	51.2	4.7	22.5	36.2

1 - Average LAB used to subtract from Gross Sample Activity

15.0	Sample LAB Average
MIN	-10.5
MAX	73.5
MEAN	30.0
SD	21.2
Transuranic DCGL <sub>W</sub>	100

**QC Measurements**

24 QC	3	14.7	65.9	4	17.9	54.0
25 QC	3	8	35.9	13	5.8	24.0

1 - Average QC LAB used to subtract from Gross Sample Activity

11.9	QC LAB Average
MIN	24.0
MAX	54.0
MEAN	39.0
Transuranic DCGL <sub>W</sub>	100

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**SURVEY UNIT 705-2-001  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	5	6	7
<b>Serial #:</b>	1164	852	971
<b>Cal Due Date:</b>	6/17/03	7/9/03	8/6/03
<b>Analysis Date:</b>	4/15/03	4/15/03	4/15/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.3	0.3	0.3
<b>Sample Time (min)</b>	2	2	2
<b>Bkgd Time (min)</b>	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	5	1	0.6
2	6	4	5.2
3	7	0	-0.9
4	5	1	0.6
5	6	2	2.1
6	7	2	2.1
7	5	0	-0.9
8	6	1	0.6
9	7	1	0.6
10	5	1	0.6
11	6	2	2.1
12	7	1	0.6
13	5	1	0.6
14	6	2	2.1
15	7	2	2.1
16	5	5	6.7
17	6	2	2.1
18	7	0	-0.9
19	5	1	0.6
20	6	1	0.6
21	7	0	-0.9
22	5	0	-0.9
23	6	0	-0.9
24	7	0	-0.9
25	5	3	3.6
		MIN	-0.9
		MAX	6.7
		MEAN	1.1
		SD	1.9
		Transuranic DCGL <sub>w</sub>	20

### Asbestos Data Summary

Sample Number	Survey Map Location Point	Room	Material Sampled & Location	Analytical Results
705-040803-315-101	1	101 I	White paint on Concrete Mortar Unit (CMU) wall, east	None Detected
705-040803-315-102	2	101 A	White paint on CMU, east wall	None Detected
705-040803-315-103	3	102	Yellow paint on CMU, south wall	None Detected
705-040803-315-104	4	104	White paint on CMU, north wall	None Detected
705-040803-315-105	5	105	White paint on CMU, north wall	None Detected
705-040803-315-106	6	100	Orange paint on CMU, east wall	None Detected
705-040803-315-107	7	100	Orange paint on CMU, north wall	3 % Chrysotile; 1.25 % Point Count
705-040803-315-108	8	101 D	Hard elbow on > 6" OD Condensate line, white friable TSI	8 % Chrysotile; 2 % Amosite; 3 % Crocidolite
705-040803-315-109	9	101 D	Hard elbow on > 6" OD Heating Water Supply line, white friable TSI	8 % Chrysotile; 2 % Amosite; 3 % Crocidolite
705-040803-315-110	10	101 D	Hard elbow on < 6" OD Domestic Cold Water line, white friable TSI	8 % Chrysotile; 2 % Amosite; 3 % Crocidolite
705-040803-315-111	11	101 F	Drywall, only	None Detected
705-040803-315-112	12	101 F	Joint compound, only	None Detected
705-040803-315-113	13	100	Joint compound, only	None Detected
705-040803-315-114	14	106	Hard elbow on < 6" OD Process Cold Water line, white friable TSI	None Detected
705-040803-315-115	15	100	Base cove with brown adhesive	None Detected

**Beryllium Data Summary**

Sample Number	Map Survey Point Location	Room	Sample Location	Result (ug/100 cm <sup>2</sup> )
<b>Building 705 - RIN 04C0670</b>				
705-07262004-00-002	2	100	Floor, random	< 0.1
705-07262004-00-003	3	101	Floor, random	< 0.1
705-07262004-00-010	10	103	Floor, random	< 0.1
705-07262004-00-015	15	102	Floor, random	< 0.1
705-07262004-00-016	16	101	Floor, random	< 0.1
705-07262004-00-019	19	101	Floor, random	< 0.1
705-07262004-00-020	20	106	Floor, random	< 0.1
705-07262004-00-022	22	206	Floor, random	< 0.1
705-07262004-00-023	23	100	Floor, random	< 0.1
705-07262004-00-025	25	101	Floor, random	< 0.1
705-07262004-00-026	26	101	Floor, random	< 0.1
705-07262004-00-028	28	101	Floor, random	< 0.1
705-07262004-00-029	29	101	Floor, random	< 0.1
705-07262004-00-121	121	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-122	122	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-123	123	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-124	124	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-125	125	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-126	126	101	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-127	127	102	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-128	128	102	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-129	129	102	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-130	130	102	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-131	131	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-136	136	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-139	139	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-140	140	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-141	141	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-142	142	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-143	143	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-144	144	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-145	145	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-146	146	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-147	147	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-148	148	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-149	149	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-150	150	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-152	152	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-153	153	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-154	154	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-155	155	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-157	157	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-158	158	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-159	159	100	Ceiling components (i.e. piping & joists), biased	< 0.1
705-07262004-00-160	160	100	Ceiling components (i.e. piping & joists), biased	< 0.1
<b>RIN 04Z2372 - Post Wipe down-Pre Fixative</b>				
705-08052004-314-001	201	100	Floor, biased	< 0.1
705-08052004-314-002	202	100	Floor, biased	< 0.1
705-08052004-314-003	203	100	Floor, biased	< 0.1
705-08052004-314-004	204	100	Floor, biased	< 0.1
705-08052004-314-005	205	100	Floor, biased	< 0.1
705-08052004-314-006	206	100	Floor, biased	< 0.1
705-08052004-314-009	209	100	Floor, biased	< 0.1
705-08052004-314-010	210	100	Floor, biased	< 0.1
705-08052004-314-011	211	100	Floor, biased	< 0.1
<b>RIN 04C0705 - Post Fixative</b>				
705-08112004-00-01	301	100	Floor, biased	< 0.1
705-08112004-00-02	302	100	Floor, biased	< 0.1
705-08112004-00-03	303	100	Floor, biased	< 0.1
705-08112004-00-04	304	100	Floor, biased	< 0.1
705-08112004-00-05	305	100A	Floor, biased	< 0.1
705-08112004-00-06	306	100	Floor, biased	< 0.1

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